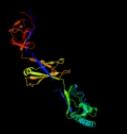
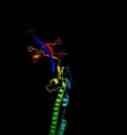
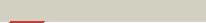
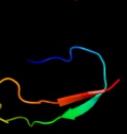
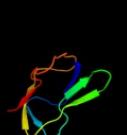
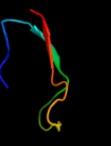
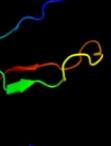
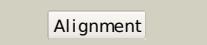
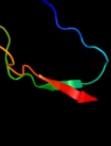
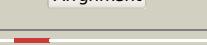
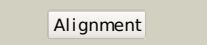
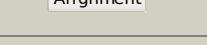


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P0AE06
Date	Thu Jan 5 11:22:11 GMT 2012
Unique Job ID	242842fc78717967

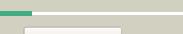
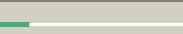
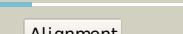
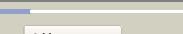
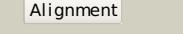
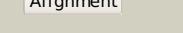
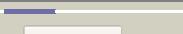
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3h9iB_			100.0	20	PDB header: transport protein Chain: B; PDB Molecule: cation efflux system protein cusb; PDBTitle: crystal structure of the membrane fusion protein cusb from escherichia2 coli
2	c2f1mA_			99.9	98	PDB header: transport protein Chain: A; PDB Molecule: acriflavine resistance protein a; PDBTitle: conformational flexibility in the multidrug efflux system protein acra
3	c3fpPB_			99.9	18	PDB header: membrane protein Chain: B; PDB Molecule: macrolide-specific efflux protein maca; PDBTitle: crystal structure of e.coli maca
4	c1t5eB_			99.9	60	PDB header: transport protein Chain: B; PDB Molecule: multidrug resistance protein mexa; PDBTitle: the structure of mexa
5	d1vf7a_			99.9	58	Fold: HlyD-like secretion proteins Superfamily: HlyD-like secretion proteins Family: HlyD-like secretion proteins
6	c3InnB_			99.9	20	PDB header: metal transport Chain: B; PDB Molecule: membrane fusion protein (mfp) heavy metal cation efflux PDBTitle: crystal structure of zneb from cupriavidus metallidurans
7	c2k33A_			98.9	27	PDB header: membrane protein, transport protein Chain: A; PDB Molecule: acra; PDBTitle: solution structure of an n-glycosylated protein using in vitro glycosylation
8	c2b8gaA_			97.1	28	PDB header: biosynthetic protein Chain: A; PDB Molecule: biotin/lipoyl attachment protein; PDBTitle: solution structure of bacillus subtilis blap biotinylated-2 form (energy minimized mean structure)
9	d1dcza_			97.0	25	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
10	c2ejgD_			96.9	19	PDB header: ligase Chain: D; PDB Molecule: 149aa long hypothetical methylmalonyl-coa decarboxylase PDBTitle: crystal structure of the biotin protein ligase (mutation r48a) and2 biotin carboxyl carrier protein complex from pyrococcus horikoshii3 ot3
11	c3n6rK_			96.8	14	PDB header: ligase Chain: K; PDB Molecule: propionyl-coa carboxylase, alpha subunit; PDBTitle: crystal structure of the holoenzyme of propionyl-coa carboxylase (pcc)

12	d1o78a_			96.7	23	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
13	c215tA_			96.7	32	PDB header: transferase Chain: A: PDB Molecule: lipoamide acyltransferase; PDBTitle: solution nmr structure of e2 lipoyl domain from thermoplasma2 acidophilum
14	c2dn8A_			96.7	23	PDB header: ligase Chain: A: PDB Molecule: acetyl-coa carboxylase 2; PDBTitle: solution structure of rsg1 ruh-053, an apo-biotin carboxy2 carrier protein from human transcarboxylase
15	c2ejmA_			96.6	29	PDB header: ligase Chain: A: PDB Molecule: methylcrotonyl-coa carboxylase subunit alpha; PDBTitle: solution structure of ruh-072, an apo-biotinyl domain form2 human acetyl coenzyme a carboxylase
16	c2kccA_			96.6	22	PDB header: ligase Chain: A: PDB Molecule: acetyl-coa carboxylase 2; PDBTitle: solution structure of biotinyl domain from human acetyl-2 coa carboxylase 2
17	d1iyua_			96.6	21	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
18	d1bdoa_			96.6	18	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
19	d1ghja_			96.4	24	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
20	d1k8ma_			96.2	18	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
21	d1qjoa_		not modelled	96.0	15	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
22	d1laba_		not modelled	95.5	26	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
23	d1gjxa_		not modelled	95.4	21	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
24	d1glaf_		not modelled	95.4	21	Fold: Barrel-sandwich hybrid Superfamily: Duplicated hybrid motif Family: Glucose permease-like
25	d1y8ob1		not modelled	95.4	23	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
26	d2f3ga_		not modelled	95.2	21	Fold: Barrel-sandwich hybrid Superfamily: Duplicated hybrid motif Family: Glucose permease-like
27	d2pnrc1		not modelled	95.1	23	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
28	c2qf7A_		not modelled	95.1	22	PDB header: ligase Chain: A: PDB Molecule: pyruvate carboxylase protein; PDBTitle: crystal structure of a complete multifunctional pyruvate carboxylase2 from rhizobium etli
29	d2gprr_		not modelled	95.1	17	Fold: Barrel-sandwich hybrid Superfamily: Duplicated hybrid motif

						Family: Glucose permease-like
30	d1pmra_	Alignment	not modelled	95.1	18	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
31	c2q8iB_	Alignment	not modelled	94.9	25	PDB header: transferase Chain: B: PDB Molecule: dihydrolipoyllysine-residue acetyltransferase component of PDBTitle: pyruvate dehydrogenase kinase isoform 3 in complex with antitumor drug2 radicicol
32	d1uoua3	Alignment	not modelled	94.9	19	Fold: alpha/beta-Hammerhead Superfamily: Pyrimidine nucleoside phosphorylase C-terminal domain Family: Pyrimidine nucleoside phosphorylase C-terminal domain
33	d1gpra_	Alignment	not modelled	94.9	27	Fold: Barrel-sandwich hybrid Superfamily: Duplicated hybrid motif Family: Glucose permease-like
34	d1brwa3	Alignment	not modelled	94.5	25	Fold: alpha/beta-Hammerhead Superfamily: Pyrimidine nucleoside phosphorylase C-terminal domain Family: Pyrimidine nucleoside phosphorylase C-terminal domain
35	c2dncA_	Alignment	not modelled	94.3	25	PDB header: transferase Chain: A: PDB Molecule: pyruvate dehydrogenase protein x component; PDBTitle: solution structure of rsg1 ruh-054, a lipoyl domain from2 human 2-oxacid dehydrogenase
36	d2tpta3	Alignment	not modelled	94.0	23	Fold: alpha/beta-Hammerhead Superfamily: Pyrimidine nucleoside phosphorylase C-terminal domain Family: Pyrimidine nucleoside phosphorylase C-terminal domain
37	c2dneA_	Alignment	not modelled	93.6	13	PDB header: transferase Chain: A: PDB Molecule: dihydrolipoyllysine-residue acetyltransferase PDBTitle: solution structure of rsg1 ruh-058, a lipoyl domain of2 human 2-oxacid dehydrogenase
38	c2jkuA_	Alignment	not modelled	93.4	20	PDB header: ligase Chain: A: PDB Molecule: propionyl-coa carboxylase alpha chain, PDBTitle: crystal structure of the n-terminal region of the biotin2 acceptor domain of human propionyl-coa carboxylase
39	c1otpA_	Alignment	not modelled	93.1	23	PDB header: phosphorylase Chain: A: PDB Molecule: thymidine phosphorylase; PDBTitle: structural and theoretical studies suggest domain movement produces an2 active conformation of thymidine phosphorylase
40	c3h5qA_	Alignment	not modelled	91.3	37	PDB header: transferase Chain: A: PDB Molecule: pyrimidine-nucleoside phosphorylase; PDBTitle: crystal structure of a putative pyrimidine-nucleoside phosphorylase2 from staphylococcus aureus
41	c2j0fc_	Alignment	not modelled	91.3	26	PDB header: transferase Chain: C: PDB Molecule: thymidine phosphorylase; PDBTitle: structural basis for non-competitive product inhibition in2 human thymidine phosphorylase: implication for drug design
42	c2dsjA_	Alignment	not modelled	90.9	26	PDB header: transferase Chain: A: PDB Molecule: pyrimidine-nucleoside (thymidine) phosphorylase; PDBTitle: crystal structure of project id tt0128 from thermus thermophilus hb8
43	c1brwB_	Alignment	not modelled	89.8	26	PDB header: transferase Chain: B: PDB Molecule: protein (pyrimidine nucleoside phosphorylase); PDBTitle: the crystal structure of pyrimidine nucleoside2 phosphorylase in a closed conformation
44	c3fmcc_	Alignment	not modelled	88.4	12	PDB header: hydrolase Chain: C: PDB Molecule: putative succinylglutamate desuccinylase / aspartoacylase; PDBTitle: crystal structure of a putative succinylglutamate desuccinylase / aspartoacylase family protein (sama_0604) from shewanella amazonensis3 sb2b at 1.80 a resolution
45	c2hsib_	Alignment	not modelled	86.9	22	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: putative peptidase m23; PDBTitle: crystal structure of putative peptidase m23 from2 pseudomonas aeruginosa, new york structural genomics3 consortium
46	c2qj8B_	Alignment	not modelled	86.9	13	PDB header: hydrolase Chain: B: PDB Molecule: mlr6093 protein; PDBTitle: crystal structure of an aspartoacylase family protein (mlr6093) from2 mesorhizobium loti maff303099 at 2.00 a resolution
47	c2gu1A_	Alignment	not modelled	86.7	17	PDB header: hydrolase Chain: A: PDB Molecule: zinc peptidase; PDBTitle: crystal structure of a zinc containing peptidase from2 vibrio cholerae
48	c2aukA_	Alignment	not modelled	83.8	20	PDB header: transferase Chain: A: PDB Molecule: dna-directed rna polymerase beta' chain; PDBTitle: structure of e. coli rna polymerase beta' g/g' insert
49	d1qwya_	Alignment	not modelled	82.9	13	Fold: Barrel-sandwich hybrid Superfamily: Duplicated hybrid motif Family: Peptidoglycan hydrolase LyM
50	c3na6A_	Alignment	not modelled	79.4	9	PDB header: hydrolase Chain: A: PDB Molecule: succinylglutamate desuccinylase/aspartoacylase; PDBTitle: crystal structure of a succinylglutamate desuccinylase (tm1040_2694)2 from silicibacter sp. tm1040 at 2.00 a resolution
51	c3cdxB_	Alignment	not modelled	79.1	16	PDB header: hydrolase Chain: B: PDB Molecule: succinylglutamatedesuccinylase/aspartoacylase; PDBTitle: crystal structure of2 succinylglutamatedesuccinylase/aspartoacylase from3 rhodobacter sphaeroides
						PDB header: transcription Chain: B: PDB Molecule: transcription antitermination protein

52	c2xhaB	Alignment	not modelled	76.7	17	nusg; PDBTitle: crystal structure of domain 2 of thermotoga maritima n-utilization2 substance g (nusg)
53	d1qpoa2	Alignment	not modelled	76.5	17	Fold: alpha/beta-Hammerhead Superfamily: Nicotinate/Quinolinate PRTase N-terminal domain-like Family: NadC N-terminal domain-like
54	c2b44A	Alignment	not modelled	75.2	13	PDB header: hydrolase Chain: A: PDB Molecule: glycyl-glycine endopeptidase lytm; PDBTitle: truncated s. aureus lytm, p 32 2 1 crystal form
55	c3d4rE	Alignment	not modelled	73.7	10	PDB header: unknown function Chain: E: PDB Molecule: domain of unknown function from the pfam-b_34464 family; PDBTitle: crystal structure of a duf2118 family protein (mmp0046) from2 methanococcus maripaludis at 2.20 a resolution
56	d1o4ua2	Alignment	not modelled	70.9	26	Fold: alpha/beta-Hammerhead Superfamily: Nicotinate/Quinolinate PRTase N-terminal domain-like Family: NadC N-terminal domain-like
57	d1ci3m2	Alignment	not modelled	70.4	31	Fold: Barrel-sandwich hybrid Superfamily: Rudiment single hybrid motif Family: Cytochrome f, small domain
58	d1e2wa2	Alignment	not modelled	69.7	31	Fold: Barrel-sandwich hybrid Superfamily: Rudiment single hybrid motif Family: Cytochrome f, small domain
59	c3it5B	Alignment	not modelled	69.3	14	PDB header: hydrolase Chain: B: PDB Molecule: protease lasa; PDBTitle: crystal structure of the lasa virulence factor from pseudomonas2 aeruginosa
60	d1qapa2	Alignment	not modelled	69.0	16	Fold: alpha/beta-Hammerhead Superfamily: Nicotinate/Quinolinate PRTase N-terminal domain-like Family: NadC N-terminal domain-like
61	c2aujD	Alignment	not modelled	66.1	28	PDB header: transferase Chain: D: PDB Molecule: dna-directed rna polymerase beta' chain; PDBTitle: structure of thermus aquaticus rna polymerase beta'-subunit2 insert
62	c2xhcA	Alignment	not modelled	63.0	22	PDB header: transcription Chain: A: PDB Molecule: transcription antitermination protein nusg; PDBTitle: crystal structure of thermotoga maritima n-utilization substance g2 (nusg)
63	c3nyyA	Alignment	not modelled	60.2	21	PDB header: hydrolase Chain: A: PDB Molecule: putative glycyl-glycine endopeptidase lytm; PDBTitle: crystal structure of a putative glycyl-glycine endopeptidase lytm2 (rumgna_02482) from ruminococcus gnatus atcc 29149 at 1.60 a3 resolution
64	c3csqC	Alignment	not modelled	55.1	20	PDB header: hydrolase Chain: C: PDB Molecule: morphogenesis protein 1; PDBTitle: crystal and cryoem structural studies of a cell wall2 degrading enzyme in the bacteriophage phi29 tail
65	c1o4uA	Alignment	not modelled	53.4	23	PDB header: transferase Chain: A: PDB Molecule: type ii quinolic acid phosphoribosyltransferase; PDBTitle: crystal structure of a nicotinate nucleotide pyrophosphorylase2 (tm1645) from thermotoga maritima at 2.50 a resolution
66	c3a8jF	Alignment	not modelled	50.5	22	PDB header: transferase/transport protein Chain: F: PDB Molecule: glycine cleavage system h protein; PDBTitle: crystal structure of et-hred complex
67	c2edgA	Alignment	not modelled	50.4	8	PDB header: biosynthetic protein Chain: A: PDB Molecule: glycine cleavage system h protein; PDBTitle: solution structure of the gcv_h domain from mouse glycine
68	c3iftA	Alignment	not modelled	50.1	16	PDB header: oxidoreductase Chain: A: PDB Molecule: glycine cleavage system h protein; PDBTitle: crystal structure of glycine cleavage system protein h from mycobacterium tuberculosis, using x-rays from the compact light3 source.
69	c3gnnA	Alignment	not modelled	49.9	10	PDB header: transferase Chain: A: PDB Molecule: nicotinate-nucleotide pyrophosphorylase; PDBTitle: crystal structure of nicotinate-nucleotide2 pyrophosphorylase from burkholderi pseudomallei
70	c2jbmA	Alignment	not modelled	49.8	10	PDB header: transferase Chain: A: PDB Molecule: nicotinate-nucleotide pyrophosphorylase; PDBTitle: qprtase structure from human
71	d1onla	Alignment	not modelled	49.2	16	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
72	c1ctmA	Alignment	not modelled	49.2	25	PDB header: electron transport(cytochrome) Chain: A: PDB Molecule: cytochrome f; PDBTitle: crystal structure of chloroplast cytochrome f reveals a2 novel cytochrome fold and unexpected heme ligation
73	c3pajA	Alignment	not modelled	48.9	7	PDB header: transferase Chain: A: PDB Molecule: nicotinate-nucleotide pyrophosphorylase, carboxylating; PDBTitle: 2.00 angstrom resolution crystal structure of a quinolinate2 phosphoribosyltransferase from vibrio cholerae o1 biovar eltor str.3 n16961
74	c1e2vB	Alignment	not modelled	48.7	31	PDB header: electron transport proteins Chain: B: PDB Molecule: cytochrome f; PDBTitle: n153q mutant of cytochrome f from chlamydomonas reinhardtii
75	c2jxmB	Alignment	not modelled	48.3	31	PDB header: electron transport Chain: B: PDB Molecule: cytochrome f; PDBTitle: ensemble of twenty structures of the prochlorothrix2 hollandica plastocyanin- cytochrome f complex

76	c2b7pA		Alignment	not modelled	46.1	10	PDB header: transferase Chain: A: PDB Molecule: probable nicotinate-nucleotide pyrophosphorylase; PDBTitle: crystal structure of quinolinic acid phosphoribosyltransferase from <i>helicobacter pylori</i>
77	c1qapA		Alignment	not modelled	44.7	9	PDB header: glycosyltransferase Chain: A: PDB Molecule: quinolinic acid phosphoribosyltransferase; PDBTitle: quinolinic acid phosphoribosyltransferase with bound2 quinolinic acid
78	c3tqvA		Alignment	not modelled	43.7	6	PDB header: transferase Chain: A: PDB Molecule: nicotinate-nucleotide pyrophosphorylase; PDBTitle: structure of the nicotinate-nucleotide pyrophosphorylase from <i>francisella tularensis</i> .
79	c1tu2B		Alignment	not modelled	43.4	31	PDB header: electron transport Chain: B: PDB Molecule: apocytochrome f; PDBTitle: the complex of <i>nostoc</i>
80	c3mxuA		Alignment	not modelled	42.7	12	PDB header: oxidoreductase Chain: A: PDB Molecule: glycine cleavage system h protein; PDBTitle: crystal structure of glycine cleavage system protein h from <i>bartonella2 henselae</i>
81	d1hpca		Alignment	not modelled	40.2	12	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoil-carrier proteins and domains
82	d1tu2b2		Alignment	not modelled	39.9	31	Fold: Barrel-sandwich hybrid Superfamily: Rudiment single hybrid motif Family: Cytochrome f, small domain
83	c2j5uB		Alignment	not modelled	38.4	43	PDB header: cell shape regulation Chain: B: PDB Molecule: mrec protein; PDBTitle: mrec <i>lysteria moncytogenes</i>
84	c3l0gD		Alignment	not modelled	38.2	9	PDB header: transferase Chain: D: PDB Molecule: nicotinate-nucleotide pyrophosphorylase; PDBTitle: crystal structure of nicotinate-nucleotide pyrophosphorylase from2 <i>ehrlichia chaffeensis</i> at 2.05a resolution
85	c1x1oC		Alignment	not modelled	35.8	9	PDB header: transferase Chain: C: PDB Molecule: nicotinate-nucleotide pyrophosphorylase; PDBTitle: crystal structure of project id tt0268 from <i>thermus thermophilus hb8</i>
86	c2zpmA		Alignment	not modelled	29.3	57	PDB header: hydrolase Chain: A: PDB Molecule: regulator of sigma e protease; PDBTitle: crystal structure analysis of pdz domain b
87	c1qpoA		Alignment	not modelled	29.2	12	PDB header: transferase Chain: A: PDB Molecule: quinolinate acid phosphoribosyl transferase; PDBTitle: quinolinate phosphoribosyl transferase (qaptase) apo-enzyme from <i>mycobacterium tuberculosis</i>
88	c2qf4A		Alignment	not modelled	27.0	33	PDB header: structural protein Chain: A: PDB Molecule: cell shape determining protein mrec; PDBTitle: high resolution structure of the major periplasmic domain from the2 cell shape-determining filament mrec (orthorhombic form)
89	d1hcza2		Alignment	not modelled	26.9	25	Fold: Barrel-sandwich hybrid Superfamily: Rudiment single hybrid motif Family: Cytochrome f, small domain
90	c3pikA		Alignment	not modelled	26.8	15	PDB header: transport protein Chain: A: PDB Molecule: cation efflux system protein cusc; PDBTitle: outer membrane protein cusc
91	d1wp1a		Alignment	not modelled	24.1	16	Fold: Outer membrane efflux proteins (OEP) Superfamily: Outer membrane efflux proteins (OEP) Family: Outer membrane efflux proteins (OEP)
92	c3tbiB		Alignment	not modelled	21.5	21	PDB header: transcription Chain: B: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: crystal structure of t4 gp33 bound to <i>e. coli</i> rnap beta-flap domain
93	c3p42D		Alignment	not modelled	21.4	11	PDB header: unknown function Chain: D: PDB Molecule: predicted protein; PDBTitle: structure of gfcc (ymcb), protein encoded by the <i>e. coli</i> group 42 capsule operon
94	c2e75C		Alignment	not modelled	21.1	17	PDB header: photosynthesis Chain: C: PDB Molecule: apocytochrome f; PDBTitle: crystal structure of the cytochrome b6f complex with 2-nonyl-4-2 hydroxyquinoline n-oxide (nqno) from <i>m.laminosus</i>
95	c2ka7A		Alignment	not modelled	20.4	16	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: glycine cleavage system h protein; PDBTitle: nmr solution structure of tm0212 at 40 c
96	c1q90A		Alignment	not modelled	20.3	13	PDB header: photosynthesis Chain: A: PDB Molecule: apocytochrome f; PDBTitle: structure of the cytochrome b6f (plastohydroquinone : plastocyanin2 oxidoreductase) from <i>chlamydomonas reinhardtii</i>
97	d1vf5c2		Alignment	not modelled	20.1	38	Fold: Barrel-sandwich hybrid Superfamily: Rudiment single hybrid motif Family: Cytochrome f, small domain
98	c2v4hA		Alignment	not modelled	19.3	15	PDB header: transcription Chain: A: PDB Molecule: f-kappa-b essential modulator; PDBTitle: nemo cc2-lz domain - 1d5 darpin complex
99	d1wp5a		Alignment	not modelled	19.3	20	Fold: 6-bladed beta-propeller Superfamily: GyrA/ParC C-terminal domain-like Family: GyrA/ParC C-terminal domain-like